



# **Naval Safety Center Mishap Investigator's Guide**

This guide is provided as a tool to assist you in conducting mishap investigations. It is only a tool. **It is not a reference and does not replace established doctrine.** If during the course of your investigation you need advice, have questions, or require assistance in researching references or reporting requirements, contact us:

Naval Safety Center  
Afloat Programs (Code 30)  
375 A Street  
Norfolk, VA 23511-3499  
email:  
[afloat@safetycenter.navy.mil](mailto:afloat@safetycenter.navy.mil)  
Comm: (757)444-3520, x7130  
DSN: 564-3520

**Visit us on the World Wide Web: <http://www.safetycenter.navy.mil>**

**( This program is in a PowerPoint format. Just hit enter or click mouse to continue, the escape key will take you to the template and you can select the slide index if you choose)**

**This guide is designed to assist you in performing a comprehensive and accurate mishap investigation. If at any time you don't understand something or are unable to find a reference, contact Mr. Steve Scudder, NAVSAFECEN, (757) 444-3520, x7115**

Simply stated, you must gather and process the necessary information to answer the who, what, where, when and why surrounding the circumstance you are assigned to investigate. Additionally, you will be required to examine the causes, assess damage, and describe the effectiveness of the measures used to limit further damage after the mishap occurred, if applicable.

### **Always remember:**

**The focus of your investigation is EXCLUSIVELY on preventing mishaps.**

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# How & Where To Begin

- Gather References, Investigation Tools & Materials
- Understand Your Role As the Senior Member or Member
- Understand the “Concept of Privilege”
- Understand Causes
- Collect Evidence & Interview Witnesses
- Analyze Investigation Results
- Establish The Root Cause
- Prep Mishap Investigation Report Message
- Transmit Message

# Reference Material & Points of Contact

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# Reference

## S

Links to the issuing authorities of applicable instructions and policies are provided to ascertain users have the most up-to-date publications.

1. Chapter A6, Mishap Investigation & Reporting, OPNAVINST 5100.19D, w/chg1  
POC: Steve Scudder, Naval Safety Center, Norfolk, VA - Comm: (757) 444-3520 DSN: 564-3520 ext. 7115

### Help on the World Wide Web:

[COMNAVAIRLAN](#)  
T

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CINCLANTFLT

CINCPACFLT

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COMSUBPAC

Naval Sea Systems Command

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USMC

USCG

NCIS

# Tools & Materials

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# **Useful Mishap Investigation Tools & Materials:**

The investigative process has many facets, including the potential exposure to hazards. The list below, though not all inclusive, contains many helpful materials that have been used in previous mishap investigations.

- Steno Notebook/Notebook
- Coveralls (Disposable) tool
- Safety Shoes
- Ruler, 12 inch
- Safety Glasses
- Black Ink Pens & Pencils
- China Marking Pencils (Red & Black)
- Protective Gloves
- Flashlight, Explosive-proof & Batteries
- Inspection Mirror 2 1/4"
- Felt Tip Markers (Red & Black)
- Polyethylene Rope, Yellow
- Respirator (Disposable Organic) & Regular)
- Pocket Knife/Multi-Tool
- Envelopes, manila
- Magnetic Retrieving
- Tape Measure (12' & 100')
- Voltmeter
- Yellow Lumber Crayon/Marker
- Graph Paper
- Hacksaw (Frame & Blades)
- Blank Labels/Tags
- Wire cutters
- Small Tape Recorder
- Screwdrivers (Flat & Phillips)
- Adjustable Wrenches, 6" & 8"
- Pliers (Needle Nose)
- Sealable Plastic Bags

Cameras:

- 35 mm SLR & Disposable
- Digital (Optional)
- Video (Optional)

Color Print Film:

- ISO- 100
- ISO- 200
- ISO- 400

**Most of the materials needed should be available on board. Other materials may be obtained from local maintenance organizations or the ship's chain of command.**

# Mishap Investigations

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# Mishap Investigation Events

- Convene & direct the investigation (1)  
COMNAVSAFECEN
- If required, request assistance from TYCOM or appointing authority. (2)
- Provide leadership to the MIB on specific policies, procedure and restrictions. (1)
- If appropriate, recommend to the appointing authority: replacement of members and changes in membership. (2)
- Oversee preparation and sending of MR/MIR. (1)
- Transfer custody of all evidence to: (2)

Commander, Naval Safety Center (Code 30)  
appointing  
375 A Street  
Norfolk, VA 23511-4399
- Request permission from the authority to close the investigation. (2)
- Has releasing authority for messages specifically related to the mishap investigation and the MIR (2)
- Send the inventory message to and all endorsers itemizing all the evidence the board considered: (2)
  1. Unclassified, non-privileged evidence sent to COMNAVSAFECEN.
  2. Unclassified, privileged evidence sent to COMNAVSAFECEN.
  3. Classified, non-privileged evidence sent to COMNAVSAFECEN.
  4. Unclassified, non-privileged evidence not sent to COMNAVSAFECEN.

Key: (1) Ship Investigation and Mishap Investigation Board

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(2) Mishap Investigation Board

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# Concept Of Privilege

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# CAUTION

Before proceeding it is imperative that you fully understand

**“The Concept of Privilege.”**

Failing to do so will seriously impede the results of your investigation  
and may have a devastating effect on the future of naval safety.

**So... Let's Talk about the  
Concept of Privilege...**

# What is “Privileged Information?”

Privileged information is that information voluntarily provided under a promise of confidentiality.

The deliberative analyses of findings, conclusions, and recommendations of the mishap investigation board (MIB) in the mishap investigation report (MIR) are privileged.

Calculations and deductions the MIB makes that would reveal the board's deliberative Process are privileged. Mishap investigation report endorsements (MIRE) are part of the deliberative process and are also privileged.

Individuals providing information to mishap investigators under a promise of confidentiality will be advised that the Navy will use its best efforts to ensure that the information is not released to any other agency or individual. Privileged safety information will not be used to support disciplinary or adverse administrative action in determining misconduct or line-of-duty status of any personnel or before any evaluation board.

**The MIB will determine which witnesses will be offered to make a statement to the Mishap Investigation Board under the concept of privilege. The determination of the MIB on who receives Privilege status can be completed beforehand or during the interview process.**

## **“Privileged Information” is used**

- to overcome an individual's reluctance to reveal complete and candid information pertinent to the events surrounding a mishap because they may believe that certain uses of that information might prove embarrassing or detrimental to themselves, their friends, shipmates, command or others.
- Encourage mishap investigators and the endorsers of mishap investigation report to complete, open, and forthright information, opinions, causes, and recommendations about the mishap.

**The bottom line is that the information gathered under the “Concept of Privilege”, when properly applied, can help to PREVENT MISHAPS.**

## **Privileged Information Will Not Be Used:**

- In any determination affecting the witness' interests.
- As evidence in determining misconduct or line of duty status of killed or injured personnel.
- As evidence to determine the witness' responsibility or that of other personnel from the standpoint of discipline.
- As evidence to assert affirmative claims on behalf of the government.
- As evidence to determine liability of the government for property damage caused by the mishap.
- As evidence before administrative bodies, such as Officer/Enlisted Separation Boards, Judge Advocate General Manual investigations/inquiries, Naval Aviator/Naval Flight Officer Evaluation Boards (FNAEB) or Marine Corps Field Flight Performance Boards (FFPB).
- In any other punitive or administrative action taken by the Department of the Navy.
- In any other investigation or report of the mishap.

# Privileged Information that Needs To Be Safeguarded:

- Once a witness makes a statement (privileged or not) to the MIB, the statement becomes MIB evidence. MIB witness statements shall not be provided to any other activity except as specified in Chapter A6 of OPNAVINST5100.19D.
- Photographs staged by the MIB to illustrate a specific condition or situation.
- MIB photographs containing captions or markings by the MIB.
- MIB member opinions, information developed or learned as part of the investigative process.
- Technical experts assisting in an investigation are not allowed to have access to any privileged data. They are not part of the board and shall not be given access to the deliberations or to MIR Part Bravo or MIR Endorsements.
- Part Bravo of the MIR is privileged; extracts may not be appended to or included in reports or any other reports.

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# **Administrative Safeguards for Privileged Information**

- Only military electronic communication facilities shall transmit MRs, MIRs and MIR endorsements.
- Distribution of part Bravo of the MIR by itself, or together with the endorsements, and part Delta of an MR outside the commands specified in Chapter A6 or the OPNAVINST 5100.19D or authorized by the CNO (09F), is strictly prohibited.
- Privileged reports and endorsements require the following narrative at the beginning:

NARR/THIS REPORT IS FOR OFFICIAL USE ONLY. THIS IS A PRIVILEGED, LIMITED USE, CONTROLLED DISTRIBUTION SAFETY MISHAP INVESTIGATION REPORT. UNAUTHORIZED DISCLOSURE OF THE INFORMATION IN THIS REPORT BY MILITARY PERSONNEL IS A CRIMINAL OFFENSE PUNISHABLE UNDER ARTICLE 92, UNIFORM CODE OF MILITARY JUSTICE. UNAUTHORIZED DISCLOSURE OF THE INFORMATION IN THIS REPORT BY CIVILIAN PERSONNEL IS GROUNDS FOR DISCIPLINARY ACTION UNDER CIVILIAN PERSONNEL INSTRUCTION 752. SEE CHAPTER A6 OF OPNAVINST 5100.19D FOR RESTRICTIONS.

Unauthorized Disclosure Is a  
**CRIMINAL OFFENSE!**

# Collecting Data and Analyzing Evidence

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# Investigation Time-lag?

*The investigation should start as soon as possible after the mishap occurs. The sooner a investigation starts, the better the results. Starting the investigation rapidly reduces the possibility of the following:*

1. Witnesses leaving the ship.
2. The ship leaving port because of ship's schedule.
3. Witnesses forgetting important information.
4. Damaged equipment and materials being moved or repaired.
5. Demoralizing the crew because of the delay in returning the scene to its original condition.
6. Transient medical evidence break down and values returning to normal.
7. Unfortunately, logs, chart entries, and other info become

# Hazards at the Scene

Investigators must protect themselves from health hazards at the mishap scene. Sharp metal edges, missing deck plates or ladders, and toxic chemicals are common.



**BE PREPARED.** Obtain protective coveralls, gloves, flashlights and other useful materials before the investigation process begins.

## *Commanding Officers responsibilities:*

- (1) Protect the mishap site or damaged area from loss or further damage. Operational requirements or damage control measures may require disturbing the scene of the mishap before the MIB arrives. In such cases, make every reasonable effort to:
  - (a) Make an accurate plot of the scene.
  - (b) Take photographs or videotape recordings of the wreckage, its distribution, and the surrounding area.
  - (c) Make a diagram of any underwater damage.
- (2) Direct the investigation and report of Class B mishaps, Class C mishaps, and all afloat special case mishaps not investigated by a MIB per A0605. Near-mishaps may be investigated and reported.
- (3) Ensure the COMNAVSAFECEN NORFOLK VA//30//00// is an information addressee on any OPREP-3 or UNIT SITREP messages submitted per OPNAVINST 5100.19D CH 1, A6-5 and A6-6. Include COMNAVSAFECEN NORFOLK VA//40//30//and CMC WASHINGTON DC//SD// for all mishaps involving embarked Marines and Marine Corps equipment.
- (4) Ensure personnel assigned to conduct internal mishap investigations, assigned as a member of a MIB, or assigned to assist the board are excluded from assignment to a JAG investigation of the same incident conducted per OPNAVINST 5100.19D CH 1, A6-1. **Personnel currently assigned to full-time safety positions shall not be appointed as a member of any legal investigation board.**
- (5) Coordinate, with the commanding officer or officer in charge of embarked units and detachments, the investigation of mishaps involving Marines and Marine Corps equipment when embarked in U.S. Navy ships and on landing craft (up to the high water mark during amphibious or inshore warfare training operations).
- (6) Direct the collection of any transitory medical evidence, such as specimens to determine blood alcohol and drug levels, pertinent to the mishap investigation
- (7) Direct the autopsy and toxicological screen of all personnel killed in the mishap as authorized by Article 17-2(1), Manual of the Medical Department (NAVMED P-5065).
- (8) Provide administrative and logistic support for the MIB. Give the senior member authority to release messages specifically related to the mishap investigation and the MIR.
- (9) Review and endorse the MIR within 7 days of receipt.

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# *Safety Officers responsibilities:*

- (1) Assist the commanding officer in conducting mishap investigations for all mishaps except those investigated by a MIB.
- (2) Coordinate with safety officers from embarked units and detachments on the investigation, reporting, and correction of the causes of afloat mishaps.
- (3) Ensure ship-wide dissemination of safety information and lessons learned resulting from mishap investigations.
- (4) The safety officer shall maintain a complete file of MRs required by higher authority, internal Mishap/Near Mishap Reports, and Injury Reports. Such reports will be retained for 5 years and then destroyed.

# Investigating The Mishap

The safety officer or the members of a mishap investigation board (MIB) are responsible for conducting an accurate, complete, and timely investigation of their assigned mishap. The investigator will:

1. Collect, organize, interpret and protect all physical and testimonial evidence.
2. Ensure photographs and videotapes accurately depict the mishap scene.
3. Interpret logs, records, blueprints, schematics, and written procedures.
4. Take statements from witnesses after advising them in writing of the restricted uses of their testimony.
5. Reconstruct the sequence of events leading up to and immediately following the mishap.

Make copies of operating logs, records, directives, and other written documents. Ensure that all changes and modifications are current and incorporated according to policies and procedures that existed at the time of the mishap. Examples:

Do the blueprints show the current configuration of the ship? Were jury-rigged equipment or structures a factor? Was proper installation and testing accomplished?

If possible, reproduce documents by mechanical (copier) or photographic means for accuracy. Watch for obvious erasures, mark-overs, or other unauthorized corrections in logs that might not appear with some methods of reproduction. If you find a questionable correction, make a note and try to find the person who made the correction.

# Helpful Checklist

- \_\_\_ Gather & read MIB references
- \_\_\_ Assemble tools & materials
- \_\_\_ Obtain personnel protective equipment
- \_\_\_ Verify mishap scene integrity & protection.
- \_\_\_ Evaluate scene
- \_\_\_ Photograph scene
- \_\_\_ Have film developed (request 3"x5" prints initially)
- \_\_\_ Sketch scene
- \_\_\_ Direct assembly of all documentary evidence (logs, charts, messages, watchbills, SORM,  
etc)
- \_\_\_ Develop witness list
- \_\_\_ Interview witnesses
- \_\_\_ Assemble statements
- \_\_\_ Upon receipt of photograph prints, identify those needed for closer evaluation
- \_\_\_ Have 8"x10" enlargements of photos of interest made
- \_\_\_ Analyze all evidence
- \_\_\_ Gather additional data as necessary to establish root cause
- \_\_\_ As necessary collect further statements / evidence to assist in establishing conclusions
- \_\_\_ Prepare MIR message
- \_\_\_ Package & ship evidence
- \_\_\_ Release MIR message

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# **Investigative Procedures**

## Initial Considerations:

- When collecting evidence, the relevant physical objects, sketches, photos, and videotapes, dictate the order and questions to ask witnesses.
- Make an accurate plot of the scene and surrounding areas. A diagram of underwater damage might need to be developed.
- Avoid the desire to repair or return the mishap scene to its original condition.
- Cordon off or cover the scene to reduce trauma and crew impact.

# **Protect the Scene**

- ✓ **The mishap scene must be protected** to prevent disturbance of wreckage.
- ✓ Medical representatives need to collect transient evidence, such as specimens to determine blood alcohol, but before bodies are removed, photos, videos, or sketches of the victims in place should be made.
- ✓ If operational requirements or damage control measures disturbed the scene before the MIB arrives, then the scene should be protected from further disturbance.
- ✓ Once a mishap investigation board convenes, only the senior member can authorize the disturbance of damaged areas or wreckage.

# Physical Evidence

**Includes wreckage, damaged equipment, or any physical proof of mishap.**

A photo or sketch should accompany item(s) to depict “as found” condition.

Investigators must handle all evidence carefully to ensure they don’t alter or destroy it. Wear gloves when handling evidence.

If possible, put all evidence in plastic bags and seal them.

Tag each item with a full description and its relationship to the mishap. Use masking tape, index cards, or self-adhesive labels to ID each item. Include:

- a. Who and when it was collected
- b. Location, including its relationship to other items
- c. Identification, such as NSN, model number, MILSPEC, and mfr.

**Remember, physical evidence is not privileged.** Therefore, ensure privileged info is not included on label or inside bags. If necessary, use a numbering, lettering or other coding system to ID evidence.

# **Criminal Evidence**

**If, during the investigation, evidence of a criminal act relating to the mishap is discovered, the senior member or mishap investigator immediately informs the appointing authority.**

*The appointing authority will then confer with legal counsel and advise the Naval Criminal Investigative Service (NCIS) and Commander, Naval Safety Center.*

In this case, the senior member:

- a. Does not release information revealing source of physical evidence obtained nor testimony given to other investigators (privileged information).
- b. Gives non-privileged physical evidence to NAVCRIMINVSERV agent.
- c. May continue investigation if directed by appointing authority.

# **Criminal Evidence**

## **(cont)**

- d. If the appointing authority permits a MIB to continue investigation involving a criminal act, the appointing authority must comply with the 1984 Memo of Understanding between the Departments of Justice and Defense which requires:
  - the appointing authority to coordinate and obtain concurrence from Dept of Justice before starting or continuing investigation.
  - the appointing authority to consult with the Judge Advocate General, Admiralty Division (code 11), to resolve questions that arise.
- e. If investigation is directed, the MIB will not use privileged information, because it could inhibit criminal prosecution. In this case, the Office of Judge Advocate General or the Naval Safety Center will give detailed instructions to the senior member.

# **Photographs and Videotapes**

- Good photographs and videotapes depicting conditions and situations are valuable evidence.
  - 35mm, single lens reflex camera with electronic flash and two zoom lenses, 50mm to macro and 35mm to 70mm or digital camera (verify digital pictures).
    - A disposable 35mm camera w/o flash may be necessary for an explosive environment. Use an explosion-proof flashlight for additional light.
  - 35mm color photos give the best depictions; Naval Imaging Commands and aircraft carrier - tender photo labs develop color film.
    - Recommend two additional disposable 35mm cameras with built in flash; one with ISO 100 film for outdoors and one with ISO 400 film for indoors.
  - Instant print cameras are good, but film is difficult to reproduce /

# ***Photos and Videotapes***

## **(cont)**

**Use your first picture on each roll to identify the film. Include the following:**

**Command:** \_\_\_\_\_

**Roll** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Photographer:** \_\_\_\_\_

**Type Camera / Lens:** \_\_\_\_\_

**Film Type:** \_\_\_\_\_

**Brief Description:** \_\_\_\_\_

\_\_\_\_\_

# ***Photos and Videotapes (cont)***

- Use the Naval Imaging Command when pictures are of sensitive nature, such as photos of mishap victims or highly publicized mishaps.
- Order a 3" X 5" print of each view. Select those needed for further study, and order one 8" X 10" for each.
- Videotape a mishap scene immediately if possible. Narrate details while taping. Zoom in on key objects to ID and show relationship of entire area. Use videotape to supplement, not replace, still photographs.
  - Take a photo of the entire scene (including adjacent areas) and photos from at least two angles if possible. Put a scale or ruler in photo to depict size. Use arrows / pencil points to

[Back To Table Of Contents](#) **details.**

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# ***Photos and Videotapes (cont)***

- ID each photo within, by including a paper or slate with location, time, date, and photo number in the photograph.
- Explain who, what, where and when on the back of each photograph; narrate the info when using videotape.
- Keep a log with details to refresh your memory when prints are returned from developers.
- Upon completion of the investigation, include all copies of photos, negatives, and proof sheets with evidence sent to the Naval Safety Center.

# ***Privileged Photos and Videotapes***

**If the MIB plans or poses the scene to illustrate a specific condition or situation as part of their deliberative process, then the photograph or videotape is privileged. For example:**

**MIB investigators take a photo of scene including a person the same height as victim to show that victim could have touched both a light switch and a sink at the same time.**

**All captions or markings placed on photos that suggest the MIB's deliberative process are privileged also. Using the same example:**

**A paragraph on back of photo describing how victim could have touched both switch and sink at the same time is privileged.**

# **Privileged Photos & Videotapes** **(cont)**

**Photos of human injuries / remains that are not staged, are not privileged. However, they still may be exempt from disclosure under exemption b(6) of the Freedom of Information Act. For example:**

A corpsman took a photo of a deceased Sailor lying on deck bloodied from an attempted tracheotomy. The photo is not privileged, but it is exempt from disclosure under the Freedom of Information Act.

**An illustration of the annotation on the back of the photo:**

Taken 211000R Dec 1999, by LCDR I.M. Investigator of the USS Mishap Ship mishap investigation board. This photograph is exempt from disclosure under exemption b(6) of the Freedom of Information Act. It shows the position of the body of SN Jones following lifesaving attempts by the ship's medical department.

**Being not privileged, the photo could be used by JAG investigators if they knew it was available.**

# **Diagrams and Sketches**

***Diagrams and sketches facilitate investigations by showing the position of people, equipment, materials, and physical parts of the environment at mishap sites.***

- 1. Use graph paper to make diagrams.**
- 2. Pick four points of reference for measurements, such as stanchions, large equipment, or frames.**
- 3. Use compartment and frame numbers to orient the diagram bow to stern and port and starboard.**
- 4. Label or code key items.**
- 5. Identify height, length, and width of objects.**

***Investigators should make diagrams and sketches as soon as possible after the mishap, while physical evidence is still in place.***

# **Diagrams and Sketches**

## **(cont)**

***Items to record and measure include:***

- 1. Location of injured and dead personnel.**
- 2. Machines and equipment affected by the mishap.**
- 3. Parts broken off or detached from the equipment.**
- 4. Objects damaged, marked or struck against.**
- 5. Gouges, scratches, dents, or paint smears.**
- 6. Tracks, or similar indications of movement.**
- 7. Defects or irregularities.**
- 8. Accumulations of stains or fluids.**

# **Diagrams and Sketches (cont)**

*Items to record and measure (cont)*

- 9. Spilled or contaminated substances.**
- 10. Areas of debris.**
- 11. Sources of distractions or adverse environmental conditions.**
- 12. Safety devices and equipment.**
- 13. Position of people and witnesses.**
- 14. Possible movement of people, before, during, or after a mishap.**

**Look for things that are obviously missing; a key part of a machine might not have been replaced during maintenance.**

# **Witness Statements**

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# *Witness Statements*

A witness statement is an oral account of the circumstances surrounding a mishap. The oral statement is not obtained under oath or in writing and may include opinions, secondhand information, and speculation about the mishap. Some witness statements provided to the board are privileged information. The MIB shall question witnesses, but will not require signed statements or summaries. **Results of the interview(s) shall be summarized and authenticated with a signature of a MIB member.**

1. JAGMAN and other investigators may make their witnesses' statements available to the board. The MIB can glean information from the statements, but should re-interview appropriate witnesses.
2. Advice to Witness forms are provided as attachment A6-A-1 and A6-A-2.

**Note: Written statements are not taken for internal shipboard mishap investigations.**

To protect the release of privileged information to the courts, DOD has limited the amount of privileged information gathered. Witnesses can make privileged statements to the MIB, however it is not automatic.

**IN ANY SAFETY INVESTIGATION, NEVER TAKE STATEMENTS UNDER OATH.**

If the witness elects to provide information under the concept of privilege, fill out an Advice to Witnesses Form, and inform the witness that their statement is for safety purposes only. The MIB member gives the form to the witness to read, understand, and sign. The MIB member also signs the statement, and provides a copy to the witness.

## ADVICE TO WITNESS

THIS IS PART OF A SAFETY INVESTIGATION  
LIMITED DISTRIBUTION AND SPECIAL HANDLING REQUIRED BY OPNAVINST  
5100.19D

**THIS STATEMENT IS NOT PRIVILEGED AND MAY BE DISCLOSED**

PLEASE READ THIS STATEMENT CAREFULLY  
CERTIFY THAT YOU UNDERSTAND IT BY YOUR SIGNATURE AT THE  
BOTTOM

I understand that:

- a. I have been requested to voluntarily provide information to a safety investigation board conducting an investigation of a Navy-Marine Corps mishaps.
- b. I AM NOT being requested to provide statement under oath or affirmation.
- c. Disclosure of personal information by me is voluntary, and that failure to provide such information will have no direct effect on me.
- d. The purpose of the information provided by me is to determine the cause of the mishap and/or the damage and/or injury occurring in connection with that mishap.
- e. All information provided by me to the SIR Board will be used ONLY for safety purposes. It is further understood, however, that the information provided by me or contained in this report may be released in response to a Freedom of Information Act (FOIA) request.
- f. Although releasable under FOIA, the information provided by me shall NOT be used by the Government:
  - (1) In any determination affecting my interests.
  - (2) As evidence to obtain evidence in determining misconduct or line of duty status of killed or injured personnel.
  - (3) As evidence to determine my responsibility or that of other personnel from the standpoint of discipline.
  - (4) As evidence to assert affirmative claims on behalf of the government.
  - (5) As evidence to determine the liability of the government for property damage caused by the mishap.
  - (6) As evidence before administrative bodies, such as Officer/Enlisted Separation Boards, Judge Advocate General Manual investigations/inquiries, Naval Aviator/Naval Flight Officer Evaluation Boards (FNAEB) or Marine Corps Field Flight Performance Boards (FFPB).
  - (7) In any other punitive or administrative action taken by the Department of the Navy.
  - (8) In any other investigation or report of the mishap about which I have been asked to provide information.
- g. My signature acknowledges that I do not need a full Promise of Confidentiality as a condition on my willingness to provide testimony to the Board and I understand that statements given without a Promise of Confidentiality may be released. (If the witness has any reservations about their statement being released to anyone outside the board itself, entitled persons in the safety endorsement process, or the public under FOIA, a Promise of Confidentiality should be offered to ensure forthright, candid testimony).

1. STATEMENT (Continue on reverse and/or attach separate sheet(s) as necessary)

2. PRINTED NAME (First, Middle, Last)

3. SIGNATURE

4. DATE

5. RANK/RATE

6. SERVICE

7. TELEPHONE NUMBER

8. ADDRESS WHERE YOU MAY BE LOCATED

**Click To Proceed**

## ADVICE TO WITNESS (PROMISE OF CONFIDENTIALITY)

THIS IS PART OF A NAVY-MARINE CORPS SAFETY INVESTIGATION  
LIMITED DISTRIBUTION AND SPECIAL HANDLING REQUIRED BY OPNAVINST  
**5100.19D**

**THIS STATEMENT IS PRIVILEGED AND IS EXEMPT FROM DISCLOSURE**

**PLEASE READ THIS STATEMENT CAREFULLY  
CERTIFY THAT YOU UNDERSTAND IT BY YOUR SIGNATURE AT THE  
BOTTOM**

I understand that:

- a. I have been requested to voluntarily provide information to a safety investigation board conducting an investigation of a Navy-Marine Corps mishaps.
- b. I AM NOT being requested to provide statement under oath or affirmation.
- c. Disclosure of personal information by me is voluntary, and that failure to provide such information will have no direct effect on me.
- d. The purpose of the information provided by me is to determine the cause of the mishap and/or the damage and/or injury occurring in connection with that mishap.
- e. All information provided by me to the SIR Board will be used ONLY for safety purposes.
- f. The information provided by me shall NOT be used:
  - (1) In any determination affecting my interests.
  - (2) As evidence to obtain evidence in determining misconduct or line of duty status of killed or injured personnel.
  - (3) As evidence to determine my responsibility or that other personnel from the standpoint of discipline.
  - (4) As evidence to assert affirmative claims on behalf of the government.
  - (5) As evidence to determine the liability of the government for property damage caused by the mishap.
  - (6) As evidence before administrative bodies, such as Officer/Enlisted Separation Boards, Judge Advocate General Manual Investigations/inquiries, Naval Aviator/Naval Flight Officer Evaluation Boards (FNAEB) or Marine Corps Field Flight Performance Boards (FFPB).
  - (7) In any other punitive or administrative action taken by the Department of Navy.
  - (8) In any other investigation or report of the mishap about which I have been asked to provide information.

1. STATEMENT (Continue on reverse and/or attach separate sheet(s) as necessary)

2. PRINTED NAME (First, Middle, Last)

3. SIGNATURE

4. DATE

5. RANK/RATE

6. SERVICE

7. TELEPHONE NUMBER

8. ADDRESS WHERE YOU MAY BE LOCATED

**Back to References**

**Click To Proceed**

## Before the interview:

1. The sooner you interview a witness after the mishap, the better their recollection of the events. Do not delay medical treatment for an interview.
2. Keep witnesses separated while awaiting interviews; they could mentally fill in parts of their observations based on what someone else may have seen or heard.
3. While witnesses are waiting, keep them busy outlining the sequence of events or making a sketch of the mishap site. Both will help the witnesses remember important information about the mishap.
4. Avoid interruptions during the interview. Turn off the telephone and find someone to keep people from knocking on the door.
5. If the witness is undergoing medical treatment or in the hospital, avoid conducting an interview while relatives are present. Do not tire or upset the witness.

## Initiating the Interview:

1. Explain who you are and the purpose of the interview.
2. Let the witness complete the appropriate “Advice to Witnesses” form, and ensure the witness fully understands the concept of privilege and the limitations on the use of their statement.
3. Ask a few personal questions to put the witness at ease and build rapport.
4. Let the witness tell you what happened without interruption.
5. When finished, ask them to recount the entire sequence.
6. Review the summary you have written, and ask questions to fill in missing details.
7. Then, and only then, start asking key questions.

## Considerations:

1. Do not dominate the witness.
2. Witnesses may be more open with a single investigator asking questions.
3. If investigator and witness are of opposite sex, it is prudent to have a third person in the room.
4. If there are more than two investigators conducting the interview, the second investigator should ask questions when the first interviewer is done.
5. Avoid trick question tactics.
6. Do not ask leading questions or those suggesting answers, such as, "I assume the noise you heard was like a rifle shot?"
7. Use open-ended questions that require more than a yes or no answer.
8. Do not use derogatory comments aimed at a person, ship, or command to lure witness into making a statement.
9. Let the witness complete the answer.
10. If the witness doesn't know peoples' names or jobs, ask for a

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## Ending an interview:

1. When ending an interview, ask witness to contact you if they remember any details.
2. Express appreciation to witness for contribution.
3. When the witness leaves, complete your summary of information.
4. Do not confuse your sources, use new note paper for each witness.
5. Ensure you are accurate. Re-interview if necessary.
6. After the initial interview, an interview at the scene is recommended. It can help a witness to remember specific details.
7. Review summary with other MIB members to ascertain completeness.
8. Secure the summaries under lock and key; prevent others from gaining information.

When investigations are conducted by MIBs, some witness statements are privileged information. However, whether the statement is privileged or not, the statements are not given to investigators of another investigation.

JAG board members and other investigators may provide their witness' statements to the MIB, but the MIB does not reciprocate. If a MIB gleans info from a JAG statement, the MIB should also re-interview the witness.

# ***Reconstructing / Re-enacting the Mishap***

After gathering the available real evidence and completing the interviews of available witnesses, reconstruct the event. The reconstruction can help to:

- 1. Establish a sequence of events, perhaps disclosing the cause of the mishap.**
- 2. Identify where you need more information.**
- 3. Identify circumstances that increased or decreased the effects of the mishap.**

Base the decision to re-enact the mishap with involved parties on:

- 1. Significant new information can be gained from re-enactment.**
- 2. It is the only way to develop the sequence of events.**
- 3. It can provide a key to prevent recurrence or verify theories and opinions of the MIB.**

# Re-enactment

In most mishaps, re-enactment is not necessary. It is not advisable if the participants are emotionally upset, nervous, tense, or agitated.

When re-enacting mishaps:

1. Ensure qualified supervisory personnel monitor the progress of the re-enactment.
2. Warn the participants not to repeat the act or unsafe practice that caused the mishap. Be prepared to stop if the participants are about to take an unnecessary risk or act unsafe in any way.
3. Ask participants to demonstrate their actions slowly and deliberately, explain as they demonstrate (talk-and-walk).

Investigators should take notes, photos, or videos for review.

# Causes

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**FACTOID:**

**HUMAN ERROR** has historically been the **NUMBER ONE CAUSE** of mishaps in the Navy.

## *Causes*

One of the most difficult tasks you will face as a member of the MIB is establishing the causes which led to the mishap. This section will examine causes and provide you with ideas and suggestions to help you establish your conclusions.

### **What are Causes?**

Simply stated, causes are the “WHY” of a mishap.

Causes are divided into four major categories:

**Human  
Design**

**Material**

**Procedural**

Now, Let's Examine Each ...

**Keep the following in mind during the course of examining causes .....**

## **What was this Mishap's Root Cause**

**this question will be answered once you have accurately identified all causes and collected and analyzed the evidence, statements, and damage reports.**

**Human Factors:** Human involvement in the events leading up to a mishap, actions taken as the mishap is occurring and actions taken after the mishap has occurred.

Click on the specific topic for examples & further clarification:

## 1. Unsafe Acts:

- a. Errors - Mistakes or unintentional acts.
- b. Violations - Deliberate behavior that breaks established rules.

## 2. Unsafe Supervision:

- a. Inadequate - Unintentional mistakes or failures by supervisors, including their absence.
- b. Violations - The supervisor's deliberate rule breaking or disregard of authority.

## 3. Unsafe Crew Conditions:

- a. Adverse Physiological State - (including physical fatigue, illness, intoxication and obesity)
- b. Adverse Mental State - (including mental fatigue, overconfidence, complacency, stress and sleep loss)
- c. Crew Resource Management - (including poor team coordination and ineffective communication)

## 4. Organizational Influence:

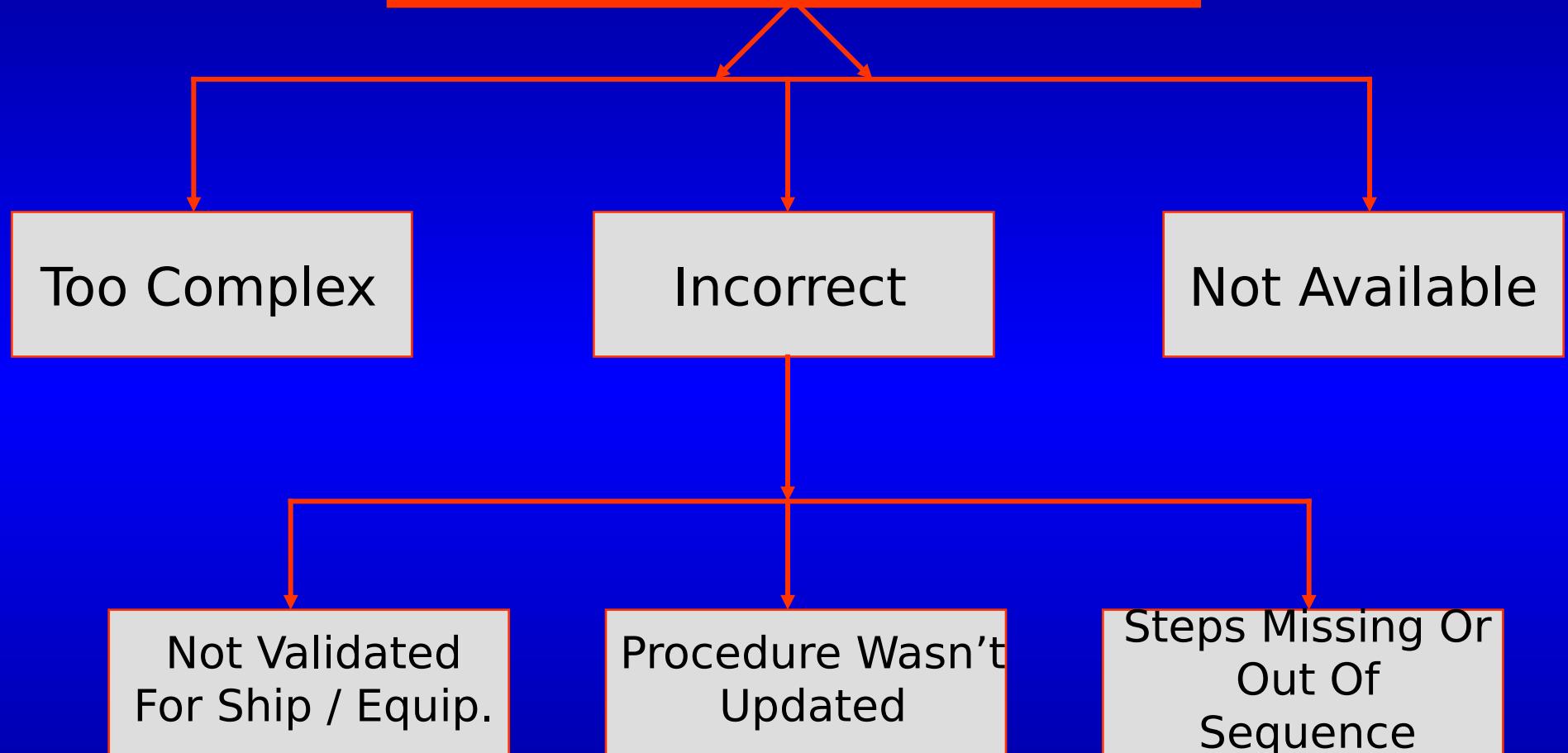
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tors controlled outside the ship.

d. Internal - factors controlled by the commanding officer.

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# PROCEDURAL FACTORS



NEXT

## **Procedural Factors:** Effect of regulations, operations and processes.

Procedures may have been issued by a higher authority such as PMS, technical manuals & NSTMs, Naval War Publications (NWP), U.S. Navy Diving Manual, Navy Tactical Publications (NTP), Operational Orders (OPORD), Ordinance Publications, Safe Engineering & Operations of LCACs (SEAOPS) Manual, Engineering Operating Sequencing System (EOSS), Submarine Ship System Manuals (SSM), Operating Procedures (OP) and Casualty Procedures (CP).

Click Procedural Factor for example & further clarification:

### **1. Too Complex:**

Average sailors cannot follow procedures because they do not understand the the procedures.

### **2. Not Available:**

The procedure does not exist or has not been received.

### **3. Incorrect:**

- a. Not validated for the type ship or equipment configuration.
- b. Not up-to-date. Was correct in the past but does not reflect current equipment configuration.
- c. Step missing or out-of-sequence.

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# Material/Equipment

Material/  
Equipment

- Condition
- Defective
- Inappropriate for use
- Installation/Repair Faulty
- Normal wear and tear
- Safeties Failed
- Unauthorized

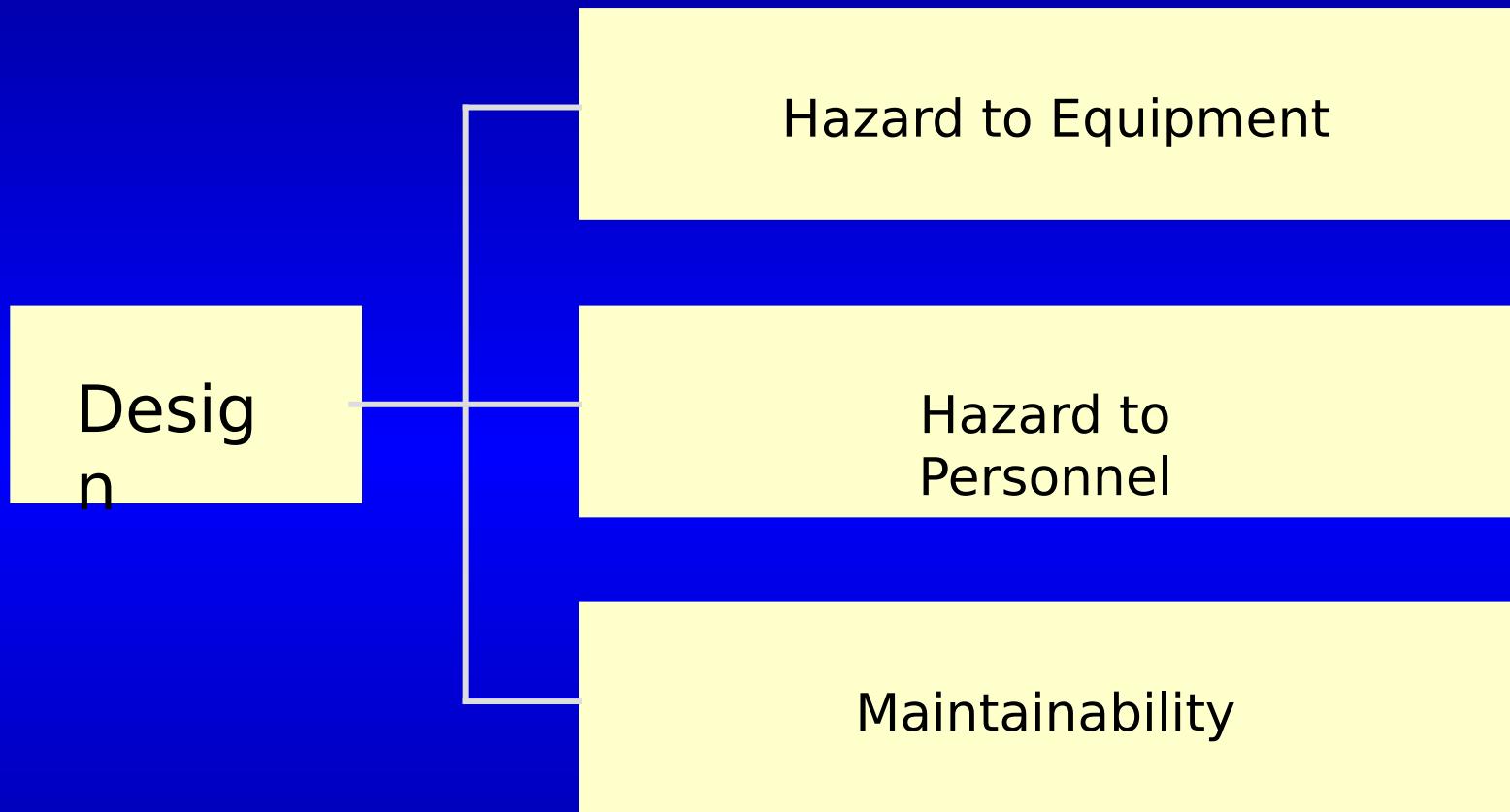
NEXT

**Material Factors:** Material failures and malfunctions despite whether the failures or malfunctions occurred because of normal or abnormal means. This includes failure due to improper repair or normal wear and tear.

Click Material Factor for example & further clarification:

1. **Unauthorized modification or alteration.**
2. **Failed Safeties or Guards**
3. **Material Condition**
4. **Inappropriate for Use**
5. **Faulty Installation or Repair**
6. **Defective Material**
7. **Normal Wear and Tear**

# DESIGN FACTORS



NEXT

## **Design Factors:** Design Defect Caused Mishap

**Click on the specific topic for examples & further clarification:**

### **1. Hazard to Personnel**

**Anything involving the design which created the hazard to personnel**

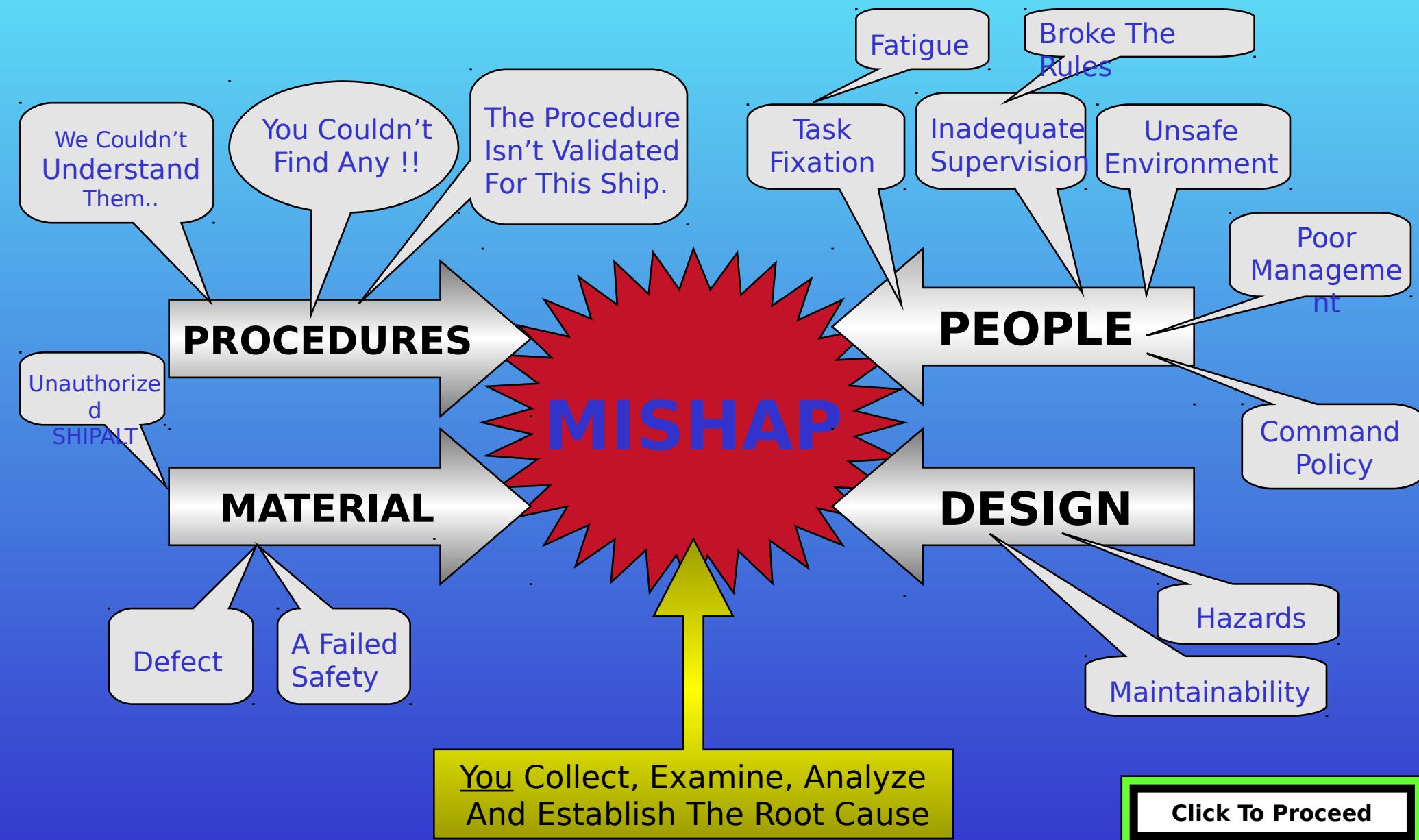
### **2. Hazard to Equipment**

**The design allowed equipment to be damaged.**

### **3. Maintainability**

**The design of the equipment makes it so difficult to accomplish maintenance on it that  
it isn't accomplished or the maintenance person is injured in the process.**

**Now that you understand causes, we will examine how to  
use  
them in drawing conclusions in your investigation.**



# Human Factors

## Example 1

Mishap: Collision

Cause: Lookout failed to identify approaching vessel

Which Human Factors was Involved?

Click  
Green  
Box

- A. Unsafe Act
- B. Unsafe Supervision
- C. Unsafe Crew Condition
- D. Organizational Influences

**BACK**

# UNSAFE ACT

Click  
Green  
Box

Which Unsafe Act Sub-Category?

Error

or

Violation

# ERROR

[Click To Proceed](#)

# Human Factors

## Example 2

Mishap: Collision

Cause: Watch Officer failed to properly monitor his watch section

Which Human Factors was Involved?

Click  
Green  
Box

- A. Unsafe Act
- B. Unsafe Supervision
- C. Unsafe Crew Condition
- D. Organizational Influences

BACK

# UNSAFE SUPERVISION

Click  
Green  
Box

Which Unsafe Supervision Sub-Category?

Inadequate

or

Violation

# INADEQUATE

[Click To Proceed](#)

# Human Factors

## Example 3

Mishap: Collision

Cause: Watch section was fatigued

Click  
Green  
Box

Which Human Factors was  
Involved?

- A. Unsafe Act
- B. Unsafe Supervision
- C. Unsafe Crew Condition
- D. Organizational Influences

**BACK**

# UNSAFE CREW CONDITIONS

Which Unsafe Crew Condition Sub-Category?

Adverse Physiological State,

Adverse Mental State, or

Crew Resource Management

Click  
Green  
Box

**ADVERSE  
PHYSIOLOGICAL  
STATE**

**Click To Proceed**

# Human Factors

## Example 4

### Mishap: Collision

**Cause: Executive Officer discouraged crew input**

Which Human Factors was Involved?

Click  
Green  
Box

- A. Unsafe Act
- B. Unsafe Supervision
- C. Unsafe Crew Condition
- D. Organizational Influences

**BACK**

# ORGANIZATIONAL INFLUENCE

Which Organizational Influence Sub-Category?

External

or

Internal

Click  
Green  
Box

# INTERNAL

[Click To Proceed](#)

# Procedural

Mishap: Individual receives chemical burn while **Example** conducting maintenance

Cause: Maintenance requirement procedures did not prohibit prolonged chemical exposure

Which Procedural Factor was

involved?

Too Complex

Not Available

Incorrect

Click  
Green  
Box

BACK

# INCORRECT

Which sub-category of incorrect?

Not validated for ship or  
equipment

Not updated

Step missing or out of sequence

Click  
Green  
Box

# STEP MISSING

[Click To Proceed](#)

# Material/Equipment Example

**Mishap:** Seaman suffered from smoke inhalation while firefighting due to breathing apparatus failure

**Cause:** OBA canister failed due to improper construction

Which Material factor was involved?

Click  
Green  
Box

Unauthorized

Safeties/guards failed

Condition

Inappropriate for use

Defective

Installation/repair faulty

Normal wear and tear

**BACK**

# DEFECTIVE

[Click To Proceed](#)

# Design Example

**Mishap:** Sailor fell and injured leg falling down ladder

**Cause:** Ladder too steep for normal

Which Design factor was involved?

Click  
Green  
Box

Hazard to Personnel

Hazard to Equipment

Maintainability

BACK

# HAZARD TO PERSONNEL

[Click To Proceed](#)

# COMPLETING THE MESSAGE

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# Completing The Mishap Investigation Report

Use the format and content below for reporting the results of the MIB. If a particular paragraph or line does not apply to this report, mark that section "N/A". Send the report as a naval message:

(Precedence - normally ROUTINE)

FM Releasing command (Normally the senior member's command)

TO Mishap ship(s)

ISIC

Group Commander (when required)

Type Commander

Other endorsers

EXW WASHINGTON DC//PMS377//

(LCAC ONLY)

Systems Command//appropriate office code//

(When determined by senior member or other endorser)

CMC WASHINGTON DC//SD//

(When a Marine or U.S. Marine Corps equipment is involved)

COMSC WASHINGTON DC//N00/N00S/PM1/PM2/PM3// (When MSC personnel or equipment is involved)

Fleet Commander (when required)

All commands assigned action on a recommendation

COMNAVSAFECEN NORFOLK VA//30/054//

INFO NAVSURFWARCCEN COASTALSTA PANAMA CITY FL//A41// (LCAC ONLY)

CNO WASHINGTON DC//N7/N76D/N771D/N785/N789E1/N09/N45//

Fleet Commander (when not an action addressee)

Group Commander (when not an action addressee)

ACU4 (LCAC ONLY)

ACU5 (LCAC ONLY)

(If the mishap involves explosives or explosive systems or equipment, include addressees provided by COMNAVSAFECEN.)

FOUO //N05102//DISTRIBUTE ONLY TO THE COMMANDER OR OFFICE CODE(S)

FOLLOWING EACH ADDRESSEE.

MSGID/GENADMIN/MSG ORIG/SER NO./MONTH//

SUBJ// AFLOAT MISHAP INVESTIGATION REPORT (MIR)//

REF/A/(OPREP-3 or any other messages related to the mishap)//

REF/B/DOC/CNO/19JAN94//

REF/C/GENADMIN/ INVENTORY OF EVIDENCE MSG//

NARR/REF A IS THE INITIAL OPREP-3 CONCERNING THE MISHAP. REF B IS OPNAVINST 5100.19D, NAVOSH PROGRAM MANUAL FOR FORCES AFLOAT WITH CHANGE 2. REF C IS THE MIR INVENTORY OF EVIDENCE. THIS REPORT IS FOR OFFICIAL USE ONLY. THIS IS A PRIVILEGED, LIMITED USE, CONTROLLED DISTRIBUTION, SAFETY MISHAP INVESTIGATION REPORT. UNAUTHORIZED DISCLOSURE OF THE INFORMATION IN THIS REPORT BY MILITARY PERSONNEL IS A CRIMINAL OFFENSE PUNISHABLE UNDER ARTICLE 92, UNIFORM CODE OF MILITARY JUSTICE. UNAUTHORIZED DISCLOSURE OF THE INFORMATION IN THIS REPORT BY CIVILIAN PERSONNEL WILL SUBJECT THEM TO

DISCIPLINARY ACTION UNDER CIVILIAN PERSONNEL INSTRUCTION 752. SEE CHAPTER A6 OF OPNAVINST 5100.19D FOR RESTRICTIONS.//

POC/NAME/RANK/PRIMARY PHONE/PRIMARY FREQ/LOCATION/SECONDARY PHONE/SECONDARY FREQ//

RMKS/ALPHA: (NONPRIVILEGED)

1. UICs OF MISHAP COMMANDs

2. HULL NUMBER/SIDE NUMBER

3. TYPE OF MISHAP (For example, flooding, fire, injury, electric shock, death, collision, grounding, explosion, back injury, chemical or toxic exposure, or equipment damage.)

4. LOCAL TIME AND DATE OF MISHAP

5. GEOGRAPHIC LOCATION (Latitude/Longitude or Port. If classified, give general area.)

6. WEATHER CONDITIONS (For example, temperature, relative humidity, visibility, lighting, ventilation, air quality, wind speed, sea state, current, tide, wind direction, precipitation, lightning, ducting, hurricane, and other.)

7. LOCATION WHERE MISHAP OCCURRED (Give workcenter or description of the location. For example, torpedo room; main deck, compartment number, side and frame number, mess decks, flight deck, or 76mm gun magazine.)

8. SHIP OR CRAFT'S EVOLUTION AT THE TIME OF MISHAP (For example, underway replenishment, mooring, and on-cushion approach to beach.)

9. SEA STATE AND DIRECTION (EXAMPLE: SEA STATE 3, 340T)

10. SHIP'S EMPLOYMENT (For example, type training (TYT), refit, independent steaming exercises (ISE), maintenance availability, underway, anchored, submerged, or dry-docked.)

11. PAYLOAD (LCAC-ONLY) (For example, type cargo and load weight)

12. SENIOR MEMBER and COMMAND (Include telephone number, if available.)

13. EQUIPMENT OR CRAFT DAMAGED OR DESTROYED BY THE MISHAP (If applicable include EIC, TEC, FGC (functional group code), or NSN (if applicable); describe damage. (EXAMPLE: STARBOARD FAIRWATER PLANE DAMAGED SHT DAMAGED

STARBOARD SIDE, RUDDER DAMAGED, ONE AN/BRA-34 ANTENA DAMAGED.)

14. ESTIMATED COST TO REPAIR OR REPLACE DOD PROPERTY (Provide the total dollar value and UIC and name of command having custody of the property (if different from reporting activity) and RUC (reporting unit code) if USMC equipment is involved.) Use estimates based on actual cost of materials and \$18/H organizational labor and \$60/Hr of depot level maintenance.

15. ESTIMATED COST OF NON-DOD PROPERTY DAMAGE

# Completing the Mishap Investigation Report

16. NUMBER OF SCHEDULED OPERATING DAYS LOST  
17. NAME/SSN/AGE/SEX/RACE/ (Repeat items 17 through 24 with designators 17A, 17B, etc.) if the mishap involves reportable injuries to more than one person.  
18. RANK and DESIGNATOR or RATE and NEC, JOB AND EMPLOYMENT STATUS (Examples of employment status include USN, USNR, USNR-R, other Department of Defense personnel, Navy federal civil servants, contractors, foreign military exchange personnel, and foreign civilians.)  
19. DUTY STATUS (On- or off-duty.) and UIC (if different from reporting activity), and RUC (reporting unit code) if Marines are involved. (If the mishap involves injuries to people from different commands, specify the UIC of each individual.) CREW POSITION - LCAC ONLY.  
20. SPECIFIC JOB OR ACTIVITY INDIVIDUAL ENGAGED IN AT TIME OF MISHAP (For example, conducting PMS, standing watch, loading stores, training, and boat crew.)  
21. NUMBER OF MONTHS EXPERIENCE AT THE JOB OR ACTIVITY (in paragraph 20)  
22. MEDICAL DIAGNOSIS (Include parts of body and type of injury.)  
23. FATALITY, EXTENT OF INJURIES, AND PROGNOSIS FOR DISABILITY (Specify fatality, missing, permanent total disability, permanent partial disability, or no disability likely. See paragraph A0601d for explanation of terms.)  
24. ESTIMATE OF LOST TIME  
A. TOTAL NUMBER OF DAYS AWAY FROM JOB (Lost work days)/DAYS LOST BEFORE PERMANENT LOSS TO COMMAND (If a loss to command-disposition)  
B. DAYS IN HOSPITAL OR SICK BAY  
C. DAYS OF LIGHT OR LIMITED DUTY  
25. ACRONYMS. (Include a list of acronyms with meaning spelled out if required used in the MIR.) EXAMPLE: AAWC-ANTI-AIR WARFARE COORDINATOR.  
26. Risk Assessment Code (RAC) (Optional)
- BRAVO (PRIVILEGED) (Contains the MIB's deliberative evaluation.)
1. BRIEF DESCRIPTION OF THE MISHAP (Include an "executive summary" of the events leading up to, through, and after the mishap. Include which one of the causes in paragraph Bravo 5A (Probable Cause(s) of the Mishap) is the root (or primary) cause of this mishap.)  
2. SUMMARY OF EVIDENCE AND TESTIMONY ANALYZED (Include the date and the registered number of evidence package sent to COMNAVSAFECEN and the date (if different) copies of the inventory were sent all endorsers), and DTG of Inventory Message.  
3. DETAILED SEQUENCE OF EVENTS  
4. OPINIONS OF THE MISHAP INVESTIGATION BOARD (AS APPLICABLE)

- A. THE ADEQUACY AND USE OF APPROVED PROCEDURES  
B. THE QUALIFICATIONS OF THE PEOPLE INVOLVED  
C. THE STATE OF TRAINING OF THE PEOPLE INVOLVED AND OF THE CREW IN COMBATING THE MISHAP  
D. THE EFFECTIVENESS OF SUPERVISION  
E. THE EFFECTIVENESS OF QUALITY ASSURANCE PROGRAM (where applicable)  
F. THE EFFECTIVENESS OF DAMAGE CONTROL EFFORTS  
G. THE ROLE PREVENTIVE AND CORRECTIVE MAINTENANCE PLAYED IN THE MISHAP  
H. ANY EXISTING MATERIAL DEFICIENCIES OR SHORTCOMING WHICH MAY HAVE CONTRIBUTED TO THE MISHAP
5. ANALYSIS OF FINDINGS  
A. PROBABLE CAUSE(S) OF THE MISHAP (State each cause of damage and injury with a short (less than 100 characters) rationale. The rationale is critical to identifying the cause because it links it to "WHO" or "WHAT" was involved. Causes should be one of the four major categories listed below, with subcategories as listed. Omit those categories and subcategories that don't apply and include as many causes in each category you determine apply. In paragraph BRAVO 1, Brief Description of the Mishap, identify which of the causes you determine to be the root (or primary) cause of this mishap.)  
(1) HUMAN FACTORS (PERSONNEL ERROR): Consider human involvement in the events leading up to a mishap, actions taken as the mishap is occurring, and actions taken after the mishap occurred. For mishaps involving human factors, state each cause with a brief explanation in one of the subcategories listed below.  
(A) UNSAFE ACTS  
((1)) ERRORS (Mistakes or unintentional acts):  
((2)) VIOLATIONS (Deliberate behavior that breaks established rules):  
(B) UNSAFE SUPERVISION  
((1)) INADEQUATE (Unintentional mistakes or failures by supervisors including the supervisor's absence)  
((2)) VIOLATIONS (Deliberate rule breaking or disregard of authority by supervisors)  
(C) UNSAFE CREW CONDITIONS  
((1)) ADVERSE PHYSIOLOGICAL STATE (For example, physical fatigue, illness, intoxication, and obesity)  
((2)) ADVERSE MENTAL STATE (For example, overconfidence, complacency, sleep loss, mental fatigue, and stress)  
((3)) CREW RESOURCE MANAGEMENT (For example, poor team coordination and ineffective communications)  
(D) ORGANIZATIONAL INFLUENCE  
((1)) EXTERNAL (Factors controlled by sources outside the ship)  
((2)) INTERNAL (Factors controlled by the commanding officer (or below) such as watchbill assignments)

# Completing the Mishap Investigation Report

EXAMPLE: HUMAN FACTOR, UNSAFE ACT, ERROR. MS3 FAILED TO TAG OUT GRIDDE.

(2) PROCEDURAL FACTORS: Consider the possible effect of regulations, operations, and processes from all levels in the chain of command. Remember, a person not following written procedures is a human factor, not a procedural factor.

Procedures and policies published by higher authority such as Preventive Maintenance System, technical manuals, Naval Warfare Publications (NWPs), Navy Tactical Publications (NTPs), U.S. Navy Diving Manual, operational orders (OPORDs), Ordnance Publications (OPs), the Safe Engineering and Operations of LCAC (SEAOPS) Manual, and the commanding officer's standing orders may contain procedural errors.

(A) TOO COMPLEX (For example, the average sailor can't follow the written procedures because he or she can't understand or follow them):  
(B) NOT AVAILABLE (For example, written procedures don't exist or have not been received):

(C) INCORRECT

((1)) NOT VALIDATED FOR SHIP OR EQUIPMENT

((2)) NOT UPDATED (Although the written procedures were correct in the past, modifications or alterations to the ship or equipment require changes to the procedures)

((3)) STEP MISSING OR OUT OF SEQUENCE

EXAMPLE: PROCEDURAL FACTOR, INCORRECT, NOT UPDATED. DUE TO MODIFICATIONS, TECH MANUAL PROCEDURES FOR DISCONNECTING HYDRAULIC HOSES WERE INCORRECT.

(3) MATERIAL FACTORS: Consider all material failures and malfunctions thoroughly, despite whether the failures or malfunctions occurred because of normal or abnormal means. This category includes failure due to improper repair or normal wear and tear.

(A) UNAUTHORIZED (For example, alterations made to the ship or equipment without authority):

(B) SAFETIES/GUARDS FAILED:

(C) CONDITION (For example, rust or corrosion):

(D) INAPPROPRIATE FOR USE (For example, off-the-shelf purchases that don't work)

(E) INSTALLATION/REPAIR FAULTY

(F) DEFECTIVE

(G) NORMAL WEAR AND TEAR (Normally, wear and tear is not a reportable mishap. However, the investigation may lead to this cause and is worth reporting.):

EXAMPLE: MATERIAL/EQUIPMENT FACTOR, SAFETIES/GUARDS FAILED. LUBE OIL RELIEF VALVE FAILED TO OPEN.

(4) DESIGN FACTORS: Consider whether a design defect caused the mishap.

(A) HAZARD TO PERSONNEL (For example, anything involving design creating a hazard to personnel):

(B) HAZARD TO EQUIPMENT (For example, design that causes damage to equipment):

(C) MAINTAINABILITY (For example, the design makes it so difficult to accomplish the maintenance that it isn't completed or sailors are injured while doing the maintenance):

EXAMPLE: DESIGN FACTOR, MAINTAINABILITY. EYE WASH STATION WAS OOC BECAUSE ITS LOCATION PROHIBITED TIMELY PMS.

B. OTHER CAUSES CONSIDERED BUT REJECTED (State each possible cause of damage and injury rejected by the MIB with a short rationale.) EXAMPLE: VISIBILITY DUE TO RAIN SQUALLS CONTRIBUTED TO THE MISHAP. REJECTED BECAUSE WATCH STANDERS VERIFIED VISIBILITY WAS CLEAR THROUGHOUT THE WATCH.

6. RECOMMENDATIONS (State recommendations for changes in procedure, equipment, or training, to prevent the recurrence of the mishap. Include the MIB's recommended action agency for each recommendation and the proposed lessons learned.) EXAMPLE:

A. USS NEVERSAIL:

(1) INSTITUTE OPERATIONAL RISK MANAGEMENT AS A TOOL FOR SAFETY DURING ALL EVOLUTIONS.

(2) CONDUCTED REQUALIFICATION OF BRIDGE/CIC WATCHSTANDERS  
B. COMNAVSEASYSOM: DEVELOP OPTIONS AND PLANS FOR INSTALLATION OF VOICE ACTIVATED RECORDING SYSTEMS FOR VHF-FM RADIOS ON ALL SHIPS.

**END**